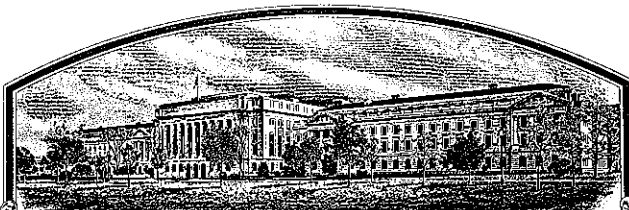


No.

9200070



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## Delta & Pine Land Company

Whereas, THERE HAS BEEN PRESENTED TO THE  
**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (ACT NO. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'DP 3627'



In Testimony Whereof, I have hereunto set  
my hand and caused the seal of the Plant  
Variety Protection Office to be affixed  
at the City of Washington, D.C.  
this 31st day of August in  
the year of our Lord one thousand nine  
hundred and ninety-four.

Attest:

*Kenneth Hears*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Mike Esq*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**  
(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Delta and Pine Land Company		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. DPX 3627	3. VARIETY NAME DP 3627
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) 100 Main Street Scott, MS 38772		5. PHONE (Include area code) (601) 742-3351	<b>FOR OFFICIAL USE ONLY</b> PVPO NUMBER 9200070 Date Jan. 16, 1992 Time <input type="checkbox"/> A.M. <input type="checkbox"/> P.M. Filing and Examination Fee. \$ 2150.- Date Jan. 16, 1992 Certificate Fee: \$ 250.00 Date Aug. 1, 1994
6. GENUS AND SPECIES NAME Glycine max	7. FAMILY NAME (Botanical) Leguminosae		
8. CROP KIND NAME (Common Name) Soybean	9. DATE OF DETERMINATION 1982		
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware		12. DATE OF INCORPORATION October 19, 1978	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Harry Collins P.O. Box 157 Scott, MS 38772			

PHONE (Include area code): (601) 742-3351

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

a. ☒ Exhibit A, Origin and Breeding History of the Variety.  
 b. ☒ Exhibit B, Novelty Statement.  
 c. ☒ Exhibit C, Objective Description of Variety.  
 d. ☒ Exhibit D, Additional Description of Variety.  
 e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.  
 f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office 1/15/92  
 g. ☒ Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act.)  
☐ YES (If "YES," answer items 16 and 17 below) ☒ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?  
☐ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?  
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

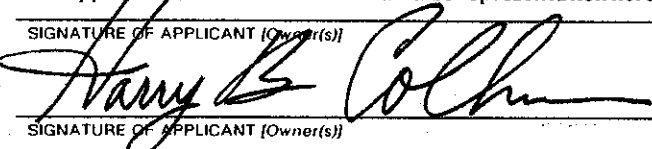
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.  
☐ YES (If "YES," through ☐ Plant Variety Protection Act ☐ Patent Act. Give date: \_\_\_\_\_.)  
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?  
☒ YES (If "YES," give names of countries and dates) USA - February 2, 1991 (amended 7/26/94)  
☐ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT [Owner(s)] 	CAPACITY OR TITLE Vice President Director of Research	DATE 1/15/92
SIGNATURE OF APPLICANT [Owner(s)]	CAPACITY OR TITLE	DATE

## EXHIBIT A

## DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 3627

Origin and Breeding History of the Variety

- 1978 - Cross number 78014 made, DP 105 X DP 345, at Scott, MS
- 1979 - F<sub>1</sub> grown in field
- 1980 - F<sub>2</sub> grown in field and advanced to F<sub>3</sub> by modified single seed descent
- 1981 - F<sub>3</sub> bulk population grown and individual plants were pulled
- 1982 - F<sub>4</sub> plant row #529101 was bulk harvested and determined to be stable and breeding true for major characteristics
- 1983 - Not grown
- 1984 - Entered in Preliminary Yield Tests
- 1985-1988 - Tested in advanced yield tests at several locations
- 1989-1990 - Tested as DPX 3627 in state experiment station tests
- 1991 - Released as DP 3627

## EXHIBIT B

## DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 3627

Novelty Statement

DP 3627 is most similar to DP 105. Differences include, but are not necessarily restricted to, date of maturity and frogeye leaf spot (Cercospora sojina) resistance. DP 3627 matures approximately 3 days later than DP 105. DP 3627 is resistant to frogeye leaf spot, whereas DP 105 is moderately susceptible.

U.S. DEPARTMENT OF AGRICULTURE  
 AGRICULTURAL MARKETING SERVICE  
 LIVESTOCK, MEAT, GRAIN & SEED DIVISION  
 PLANT VARIETY PROTECTION OFFICE  
 BELTSVILLE, MARYLAND 20705

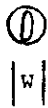
EXHIBIT C  
 (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY  
 SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Delta and Pine Land Company	TEMPORARY DESIGNATION DPX 3627	VARIETY NAME DP 3627
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 100 Main Street Scott, MS 38772		FOR OFFICIAL USE ONLY PVPO NUMBER 9200070

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,  ). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

## 1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)  
 3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)  
 4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

## ★ 2. SEED COAT COLOR: (Mature Seed)

1 = Yellow

2 = Green

3 = Brown

4 = Black

5 = Other (Specify) \_\_\_\_\_

## 3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton')

2 = Shiny ('Nebsoy'; 'Gasoy 17')

## ★ 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

## ★ 5. HILUM COLOR: (Mature Seed)

1 = Buff

2 = Yellow

3 = Brown

4 = Gray

5 = Imperfect Black

6 = Black

7 = Other (Specify) \_\_\_\_\_

## ★ 6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow

2 = Green

## ★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low

2 = High

## ★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1<sup>a</sup>)2 = Type B (SP1<sup>b</sup>)

## ★ 9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis')

2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')

3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')

4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

## ★ 10. LEAFLET SHAPE:

1 = Lanceolate

2 = Oval

3 = Ovate

4 = Other (Specify) \_\_\_\_\_

## 11. LEAFLET SIZE:

☒ 31 = Small ('Amsoy 71'; 'A5312')  
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

## 12. LEAF COLOR:

☒ 21 = Light Green ('Weber'; 'York')  
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

## ★ 13. FLOWER COLOR:

☒ 2

1 = White

2 = Purple

3 = White with purple throat

## ★ 14. POD COLOR:

☒ 1

1 = Tan

2 = Brown

3 = Black

## ★ 15. PLANT PUBESCENCE COLOR:

☒ 1

1 = Gray

2 = Brown (Tawny)

## 16. PLANT TYPES:

☒ 21 = Slender ('Essex'; 'Amsoy 71')  
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

## ★ 17. PLANT HABIT:

☒ 1

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

## ★ 18. MATURITY GROUP:

☒ 0 ☒ 91 = 000  
9 = VI2 = 00  
10 = VII3 = 0  
11 = VIII4 = I  
12 = IX5 = II  
13 = X

6 = III

7 = IV

8 = V

## ★ 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

## BACTERIAL DISEASES:

★

☒ 2Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)

★

☒ 0Bacterial Blight (*Pseudomonas glycinea*)

★

☒ 0Wildfire (*Pseudomonas tabaci*)

## FUNGAL DISEASES:

★

☒ 0Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojae*)

★

☐

Race 1

☐

Race 2

☐

Race 3

☐

Race 4

☐

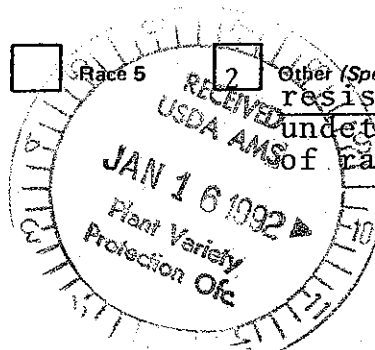
Race 5

☒ 2

Other (Specify)

resistant to an  
undetermined number  
of races☒ 0Target Spot (*Corynespora cassicola*)☒ 0Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☒ 0Powdery Mildew (*Microsphaera diffusa*)

★

☒ 0Brown Stem Rot (*Cephalosporium gregatum*)☒ 1Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

## 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

## FUNGAL DISEASES: (Continued)

- ★ ☐ 0 Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*)
- ☐ 2 Purple Seed Stain (*Cercospora kikuchii*)
- ☐ 0 Rhizoctonia Root Rot (*Rhizoctonia solani*)
- Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
- ★ ☐ 1 Race 1 ☐ 1 Race 2 ☐ 0 Race 3 ☐ 0 Race 4 ☐ 0 Race 5 ☐ 0 Race 6 ☐ 0 Race 7
- ☐ 0 Race 8 ☐ 0 Race 9 ☐ 0 Other (Specify) \_\_\_\_\_

## VIRAL DISEASES:

- ☐ 0 Bud Blight (Tobacco Ringspot Virus)
- ☐ 0 Yellow Mosaic (Bean Yellow Mosaic Virus)
- ★ ☐ 0 Cowpea Mosaic (Cowpea Chlorotic Virus)
- ☐ 0 Pod Mottle (Bean Pod Mottle Virus)
- ★ ☐ 2 Seed Mottle (Soybean Mosaic Virus)

## NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)
- ★ ☐ 1 Race 1 ☐ 1 Race 2 ☐ 1 Race 3 ☐ 1 Race 4 ☐ 1 Other (Specify) 5 \_\_\_\_\_
- ☐ 0 Lance Nematode (*Hoplocaimus Colombus*)
- ★ ☐ 1 Southern Root Knot Nematode (*Meloidogyne incognita*)
- ★ ☐ 0 Northern Root Knot Nematode (*Meloidogyne Hapla*)
- ☐ 1 Peanut Root Knot Nematode (*Meloidogyne arenaria*)
- ☐ 0 Reniform Nematode (*Rotylenchulus reniformis*)
- ☐ OTHER DISEASE NOT ON FORM (Specify): \_\_\_\_\_

## 20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ★ ☐ 0 Iron Chlorosis on Calcareous Soil
- ☐ Other (Specify) \_\_\_\_\_

## 21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ☐ 0 Mexican Bean Beetle (*Epilachna varivestis*)
- ☐ 0 Potato Leaf Hopper (*Empoasca fabae*)
- ☐ Other (Specify) \_\_\_\_\_

## 22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	DP 105	Seed Coat Luster	DP 105
Leaf Shape	DP 105	Seed Size	DP 105
Leaf Color	DP 105	Seed Shape	DP 105
Leaf Size	DP 105	Seedling Pigmentation	DP 105

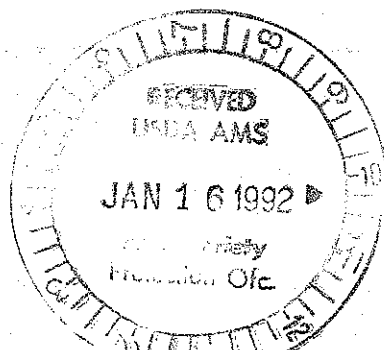
23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

9200070

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
Deltapine 3627 Submitted	135	1.8	8.0			40.1	22.0	13.4	-
Deltapine 105 Name of Similar Variety	131	2.0	8.0			39.8	23.0	13.0	-

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBT1-A<sub>2</sub> in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.





## EXHIBIT D

## DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 3627

Additional Description of Variety

DP 3627 is an early group VI soybean maturing three to four days later than DP 105 and one (1) day earlier than Young. It has been released because of its excellent yield potential over a range of soil types and conditions, especially in the midsouth, as compared to Delta and Pine Land Company products in group VI and other widely grown varieties of similar maturity. DP 3627 has out yielded Centennial and Young an average of 6.0 bushels per acre and DP 506, DP 566, DP 726 and DP 105 by an average of 7.2, 9.0, 6.1 and 4.3 bushels per acre, respectively, in Delta and Pine Land Company tests from 1987-1989. It is similar to DP 105 in resistance and tolerance to diseases except DP 3627 is resistant to frogeye leaf spot, whereas DP 105 is moderately susceptible. DP 3627 has purple flowers, grey pubescence and tan pods. Seeds are dull yellow with imperfect black hila and are of size averaging about 3000 seed per pound. Standability is excellent. There may be up to one ~~off-type~~ plant per 5,000 with white flowers, tawny pubescence or taller plants. Hila are normally imperfect black, but may vary from buff to black, depending on environmental effects.

variant  
JSS  
11 July 1994

## SUPPLEMENT TO APPLICATION FORM

Explanation of System for Numbering Tables

Tables connected with each exhibit are designated by the letter for that exhibit. For example, "B".

Summary tables (those on which claims are based and information summarized) have the exhibit letter followed by a Roman numeral. For example, "TABLE B I - AVERAGE DATA FOR 32 TESTS CONDUCTED IN MISSISSIPPI, TENNESSEE, ARKANSAS, LOUISIANA, VIRGINIA, NORTH CAROLINA, SOUTH CAROLINA AND GEORGIA IN 1989, 1990 AND 1991".

Tables of performance in individual tests are used to bring together results from different years and locations. These data are used to calculate averages for varieties in years to be combined in a summary. These tables have an exhibit letter, B, followed by a summary table numeral, I, and an Arabic numeral, 1. For example, "TABLE B I 1 - 1991 OVERALL SUMMARY GROUP VI MERIT, ALL165M".

Original tables of test results from which TABLE B I 1 is prepared are designated by a lower case letter. For example, "TABLE B I 1a - 1991 GROUP VI MERIT TEST, SOUTH LOUISIANA, 165M079".

Copies of original test data collected by our Research Department are not included. These tables may contain data which is confidential but are available if necessary.

This system makes it easy to find the data on which any exhibit is based.

## EXHIBIT E

## DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 3627

Statement of the Basis of Applicant's Ownership

Delta and Pine Land Company owns the variety DP 3627 as this variety was developed by Delta and Pine Land Company. The cross was made by Delta and Pine Land Company personnel and subsequent selection and testing which led to the decision to release DP 3627 were conducted by personnel of Delta and Pine Land Company.